REMARKS

Allowable Subject Matter

Applicants gratefully acknowledge the Examiner's indication that claims 10-12, 14, 16, 30-32, 34, 38, 40, 51, 52, and 57-60 recite allowable subject matter.

Amendments

Claim 1 is amended to incorporate the feature recited in claim 10, which is now cancelled. Similarly, claim 20 is amended to incorporate the feature recited in claim 30, which is now cancelled. As noted above, claims 10 and 30 were indicated as reciting allowable subject matter. Thus, claims 1 and 20 and the claims dependent thereon are now in condition for allowance. These amendments are made solely to expedite issuance of the subject matter indicated to be allowable and are not to be construed as acquiescence to the prior art rejections presented in the Office Action of May 31, 2006

Claims 7 and 27 are amended to recite a chain of 5 to 50 units containing nucleotides, and nucleotide analogs, nucleoside analogs, or combinations thereof. This is supported throughout applicants' disclosure. See, e.g., pages 3-5.

Claims 9 and 29 are amended to delete the recitation of bonding via a spacer arm. As a result, claims 49 and 55 are cancelled, and claims 50 and 56 are amended to depend from claims 1 and 20 respectively.

Rejection under 35 USC 112, second paragraph

Claims 9, 29, 49 and 55 are rejected as allegedly being indefinite. Specifically, is asserted that it is unclear whether directly bonded means one atom two atoms are involved in the binding. This rejection is respectfully traversed.

Independent claims 1 and 20 expressly recite that fluorescent conjugate comprising an oligonucleotide covalently bonded to a rare-earth metal cryptate. Claims 9 and 29 merely further define this concept by stating that oligonucleotide is directly bonded to a rare-earth metal cryptate, which one of ordinary skill in the art would readily recognize as meaning that there is a direct bond between the oligonucleotide and the rare-earth metal cryptate, i.e., no spacer arm

such as recited in claims 50 and 56. The question of whether one atom or two atoms is involved is itself unclear. What atoms is the Examiner referring to? For there to be a direct bond between the oligonucleotide and the rare-earth metal cryptate, two atoms must be involved, one associated with the oligonucleotide and the other associated with the rare-earth metal cryptate. A single atom can not form a bond.

In view of the above remarks, withdrawal of the rejection is respectfully requested.

Rejection under 35 USC 102(b) in view of the Sessler et al.

In the rejection, it is asserted that since structural formula is presented in, e.g., claim 1 any chemical compound which is a metal complex wherein "the metal complex is interpreted as a rare-earth metal complex" will anticipate the claimed invention. Based on this assertion, the Examiner argues that Sessler et al. (US 5,559,207).

As noted previously, the rejection asserts that US '207 discloses a texaphyrin metal complex. However, the rejection fails to present any explanation as to why one of ordinary skill in the art would consider any texaphyrin metal complex, let alone the complexes disclose by US '207, to be a cryptate metal complex.

The rejection states that there is no chemical structure for the cryptate recited in the prior version of claim1. As a result, the Examiner concludes that "any structure with the metal complex is interpreted a s rare-earth metal cryptate, the teachings of Sessler et al. anticipate the limitations of the claims." However, no rationale is provided in support of this conclusion. More importantly, the rejection fails to give any explanation as to why one of ordinary skill in the art would consider the porphyrin-like compounds of Sessler et al. to be cryptates.

The rejection makes the unjustified assertion that US '207 discloses a metal compound which is "europium cryptate." In support of this assertion, the rejection cites column 3, lines 56-65. However, no mention of cryptate complexes or any other complexing structure is made in this portion of the disclosure. Instead, this portion of the disclosure only describes examples of the divalent and trivalent metal cations that have catalytic activity for performing ester bond hydrolysis.

The attached excerpt from IUPAC describes cryptands as being "macrobicyclic,

macrotricyclic, etc., compounds generally having nitrogen atoms at the bridgehead positions." **The excerpt from IUPAC also states that when the cryptand incorporates a "guest" in its cavity, the resultant adduct is a "cryptate."** Further, the attached excerpt from IUPAC discloses that "coplanar cyclic polydentate ligands, **such as porphyrins, are not regarded as cryptands**." (emphasis added). Further, the Merck index describes bicyclic "crown" ethers as cryptates and defines crown ether as macrocyclic compounds having $-CH_2-CH_2-O-$ as a repeating unit.

Compare also the cryptates disclosed by Gansow et al. (US 4,257,955) and Lehn et al. (US 5,346,996) (copies enclosed).

The Examiner asserts in the most r4ecent Office Action that the excerpt from IUPAC is not relevant to the claims. However, the excerpt from IUPAC is quite relevant as it directly refutes the Examiner assertion that the porphryin-like compounds of Sessler et al. would be considered cryptates by one of ordinary skill in the art.

In any event, as noted above, claims 1 and 20 are amended to incorporate the subject matter of allowable claims 10 and 30, respectively. Withdrawal of the rejection is respectfully requested.

Rejection under 35 USC 102(b) in view of the Sessler et al. and Zhao et al.

In the rejection, it is alleged that Zhao et al. (US 6,306,975) discloses a rare earth metal complex for use as a donor label. However, Zhao et al. do not disclose or suggest a process for constructing a conjugate of a biological molecule, an oligonucleotide covalently, and a rare-earth metal cryptate, covalently bonded. Nor does US '975 disclose or suggest such a conjugate or the use thereof in an assay.

For the reasons presented above, withdrawal of the rejection is respectfully requested.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,

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